

Urban Trail – Feasibility Study and Concept Design

DRY LAKE CONNECTION

Technical report



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Distribution

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1 Dry Lake connection

1.1 Main Goal

Connecting the neighborhood around the third lake (Liqeni i Thate) to the existing cycle & pedestrian paths of the Grand Park area, according to the mayor's request on the occasion of the urban trail project presentation, 4.10.2023

1.2 Available data and collection of information

- Digital Terrain Model DTM (2015-2017) 3D
Map: https://geoportal.asig.gov.al/map/?fc_name=Hillshade_2015_group&auto=true
- Zoning Plan: <https://arcg.is/00qeav>
- Meeting with Municipality officials
 - Anjeza Çallpani, General Director of Public Works (Municipality of Tirana)
 - Enton Punavija, Director of Transport and road traffic department (see minutes of meeting attached)
- Drawings from the Transport and road traffic department
- Field visits



Pedestrian underpass



Road with sidewalk passing the dam



Street junction, east end of the dam



Parallel road and highway, view to the west

2 Urban analysis

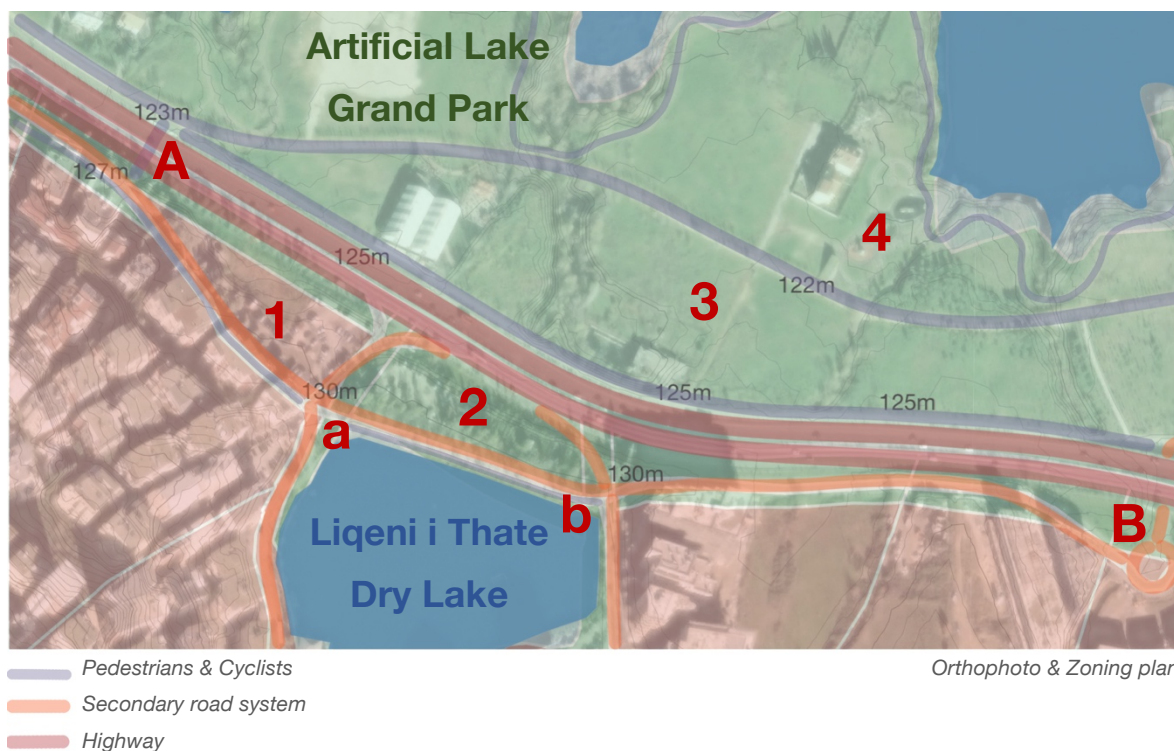
2.1 Territory

A convenient connection between the Dry Lake and the Grand Park area must be safe, short, clearly visible and intuitively accessible. The highway is obviously the main obstacle. Thus, the observation perimeter for the study was set to this section of the highway, between the two points A and B.

- A) the existing, though almost hidden/hard to find pedestrian underpass with stairs
- B) the secondary/parallel road underpass east of the dry lake

Besides the high-density neighborhoods on the west side of the lake and the ongoing building developments on the east side, the following four areas attract attention:

- 1) Private area (development under construction)
- 2) Dam (privately used, tree nursery, plants shop, parking), green zone.
- 3) Green belt (between highway and pedestrian path, with sport center, abandoned building)
- 4) Bicycle Academy (newly opened)



A) Pedestrian underpass





B) Road underpass



1) Priv. devt.; Visual. from <https://www.aic.al/portfolios/liqeni-i-thate/> 2) Dam
Does this show a pedestrian overpass?



3) green belt between the pedestrian path and the highway



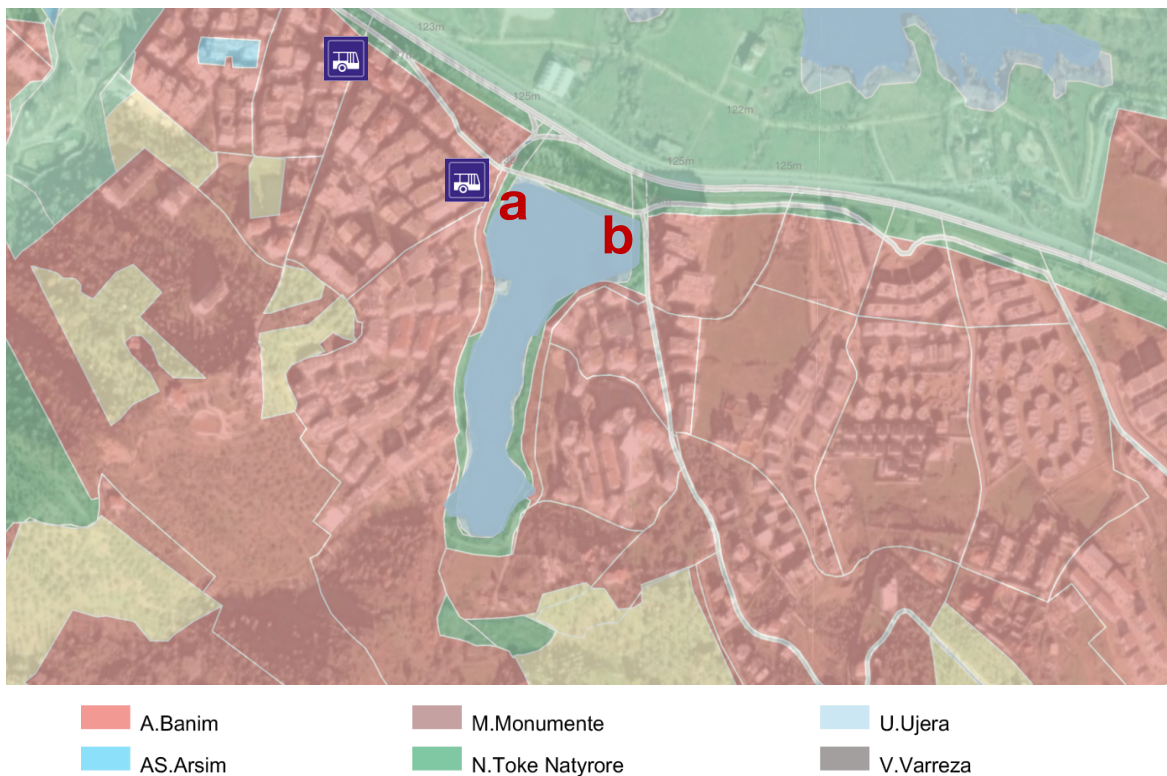
4) Cycling Academy for children/schools



Layout plan

2.2 Traffic / Mobility

Considering the large area around the lake, recently zoned for building, a continually **increasing volume of traffic must be expected**, especially from and to the highway, crossing at the junctions (a and b). There's been no detailed mobility study performed yet.



2.2.1 Public Transport, pedestrians & cyclists

The Dry Lake neighborhood is served by one **bus line** (2), providing bus stops at junction a) – *Liqeni i thate* and 250m west of it (*Rruga Peti*), which is served only in west direction.

Sidewalks are often missing, in bad shape, occupied by private installations or cut by private ramps/property entrances.

There are no **bike lanes** marked/built yet in and around the neighborhood. A pedestrian path project with bike lane around the Dry Lake has been implemented in parts so far, due to some unsettled expropriation processes along the eastern shore of the lake.

The sidewalk/pedestrian path is around 3.00m wide.



Dry Lake pedestrian/bike trail project map



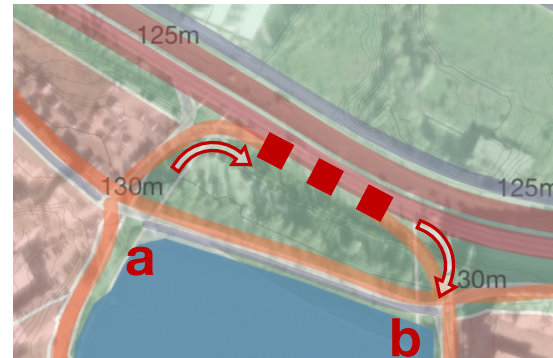
The implemented part along the west shore.

2.2.2 Motorized traffic

Regarding the exit / entrance from and to the highway it is noticeable, that the concept implemented does not comply with the provisions given by the governments planning instruments. According to the municipality's representatives, the situation must be corrected due to safety reasons (see Attachment, Minutes of Municipality Meeting).



Standard situation according to the government's planning instruments (<https://www.planifikimi.gov.al>)



Actual situation: The exit from the highway connects directly to point b), which creates a highly conflictual and dangerous section where the acceleration / deceleration lanes are overlaid.

2.2.3 Approved project (parallel road)

According to the municipality's Transport & Road Traffic Department, there's an approved preliminary project regarding the widening of the "Liqeni i Thate" road, from the zoo roundabout, crossing the dam and continuing till the roundabout (Point B)

The road is part of the General Local Plan (PPV), approved by decision no. 1, 14.04.2017 by the National Council of Territory (KKT). The road is planned 17m wide, according to the section shown.



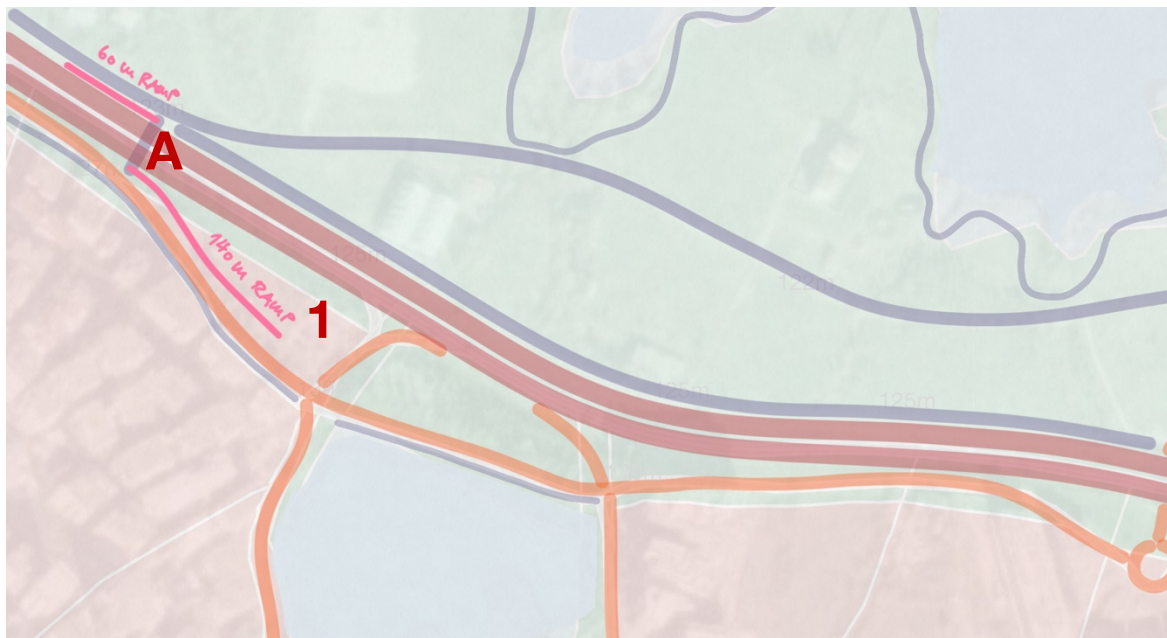
Plans provided by the Transport & Road Traffic Directorate, Municipality of Tirana, January 2024

The planned bike lane with the required width and a 3.0m wide sidewalk on both sides of the road is certainly a positive aspect.

On the other hand, it is obvious that the project's footprint is overlapping existing buildings and the outlines of the highway at some parts. So, there is a risk that the sidewalk and the bike lane must be slimmed down in those sections.

3 Studied options

3.1 Option 1 – Expanding the underpass



In this case, expanding means improving accessibility, especially for bicycles, caregivers with strollers, wheelchairs, elderly, etc.

Due to the topographical conditions, a ramp of approx. 140-150m length would be required on the south side and around 60m on the north side of the highway.

Strengths	Weaknesses
Costs may be relatively low	Unattractive
Practical solution for those used to it	Lack of safety
	Hidden / not visible
	Considerable building intervention
	Conflict with development (1) under constr.
	Wastewater and stormwater problems

3.2 Option 2 – Overpass direct connection



This represents the direct connection from one of the main junctions in the east end of the dam, overpassing the highway and descending towards the bicycle academy (4).

Junction b) serves as an access point to the pedestrian trail system around the Dry Lake and the existing secondary road system.

To provide maximum safety for all participants it is very important that the exit from the highway will be moved to the originally planned position.

The junction b itself must be designed with traffic slowing measures, giving pedestrians and cyclists priority.

Strengths

Weaknesses

Attractive and most direct connection

long elevated structure (cost)

Intuitive and visible from all around

Connecting the bicycle academy

Helps pushing the sustainable mobility campaign

3.3 Option 3 – Overpass long connection



Similar to option 2, but dragging the overpass more east, evading possible property issues around the abandoned structure and field (3)

Strengths

Attractive overpass connection

Intuitive and visible from all around

Connecting the bicycle academy

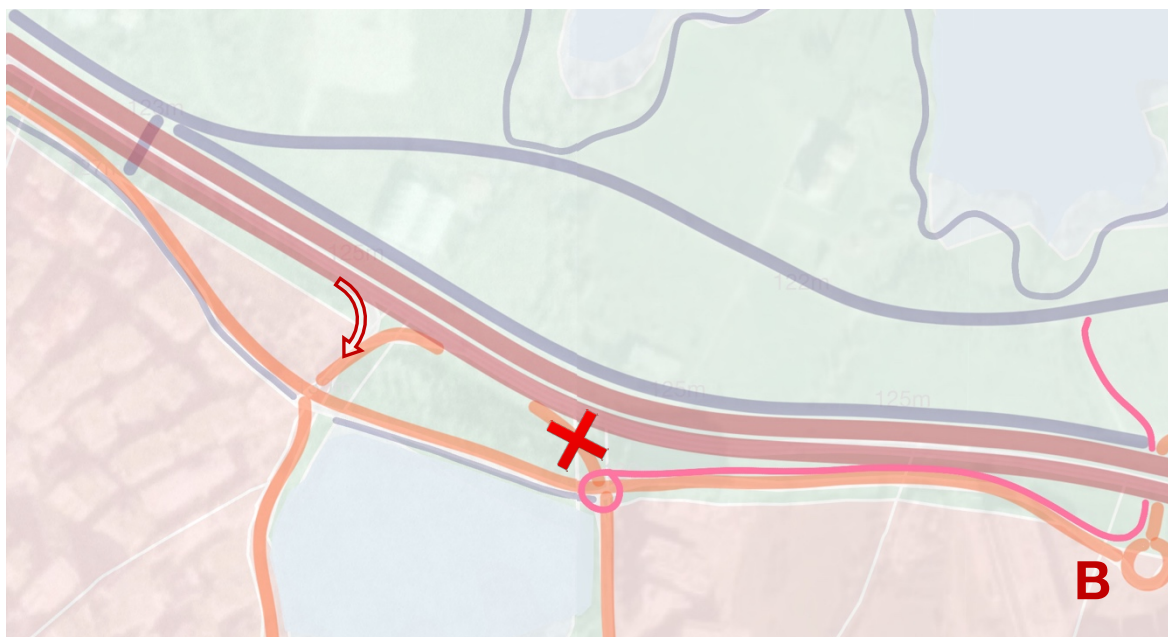
Helps pushing the sustainable mobility campaign

Weaknesses

Very long elevated structure (cost)

Conflict with the planned widening of the road

3.4 Option 4 – Using point B) underpass



Taking benefit from the planned widening of the secondary road in east direction to the roundabout and underpass.

Strengths

Shared investment

Weaknesses

Unattractive (between roads / underpass)

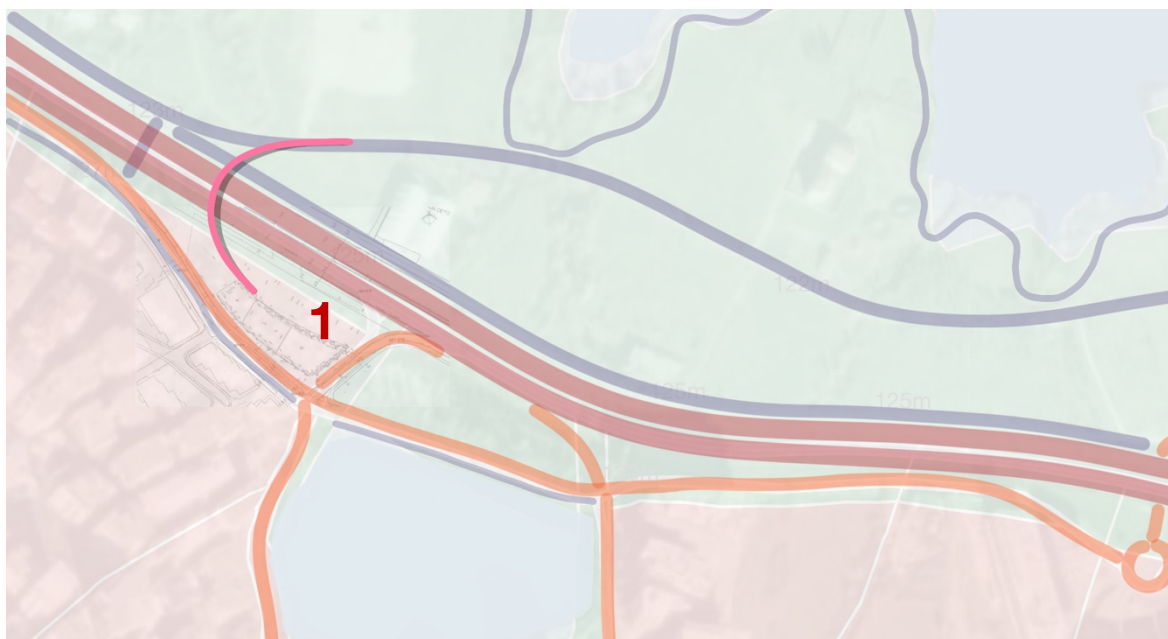
Reduced safety (shared space)

Long / detour character

Less intuitive route

Wastewater and stormwater problems

3.5 Option 5 – Free interpretation



The visualization found on <https://www.aic.al/portfolios/liqeni-i-thate/> showing the development (1) under construction, seem to suggest an overpass.

Assuming this is a view from the north, the overpass would develop as a curved bridge towards the pedestrian path on the north side of the highway.



Although the suggestion looks attractive and is well visible from the north side of the highway, it lacks visibility from the Dry Lake side and there's no indication of a safe connection to the Dry Lake pedestrian paths.

Strengths

Attractive overpass

Weaknesses

Hardly visible from the Dry Lake side

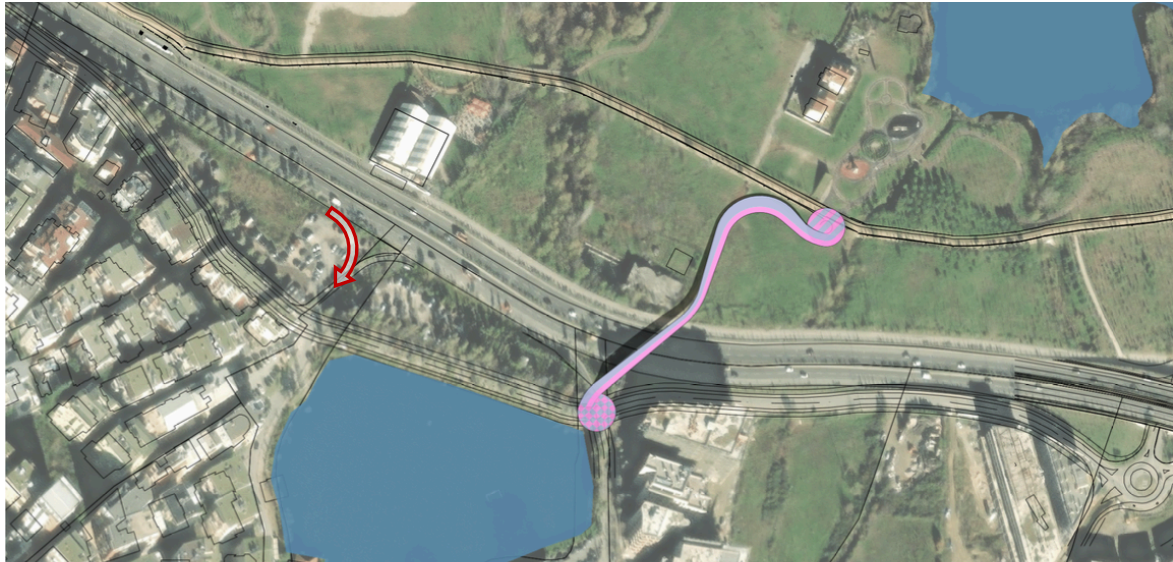
Private property passage

Unclear access point

4 Recommendation

Based on considerations related to urban and traffic planning, and based on meetings and discussions with specialists at the municipality, it is strongly recommended to proceed with the implementation of **Option 2 – Overpass direct connection**.

In any case, it is assumed that the highway exit will be removed from the actual position at the east end of the dam.



See also Annex B_II Visualization of Option 2

It can be concluded that the building of the trail resp. overpassing the highway and following the whole line as proposed is functional and feasible, because it:

- develops an interesting and intuitive connection between the Dry Lake and Grand Park area (Liqeni Artificial)
- connects an important neighborhood of Tirana in the shortest/safest way possible
- provides access for different users
- allows a safe passage over the high dense traffic highway and intersections
- creates future destination development
- connects the Bicycle Academy
- sets a new landmark
- respects landscapes and natural beauty
- encourages people to use bicycles and to walk - having a healthier life
- integrates in the urban context and topography
- gives an innovative example with local and national impact.
- corresponds to contemporary initiatives and urban development internationally

As planner, we recommend implementing this option for its positive impact on urban and traffic planning. It aligns with the desired goals and objectives, considering various factors such as pedestrian and cyclist safety, traffic flow management, and the overall urban landscape. Its implementation is expected to result in improved efficiency, accessibility, and the overall quality of the urban environment.

Considering the extensive developments intended in the Dry Lake (Liqeni i Thate) area, it is crucial to access the neighborhood around it and connect it to the existing bicycle & pedestrian paths of the Grand Park area. It is important to plan very carefully, to achieve high quality of coexistence (users and residents), allowing a maximum of synergies and safety. Therefore, it is recommended to organize a project competition for specialized teams, to foster creative and innovative solutions for the overpass, including the connection junctions.

5 Cost

The following cost estimation has been performed for the recommended direct overpass connection **Option 2**.

Respective design and supervision services are considered part of the following amounts.

Cost accuracy +/- 20% and price basis as of January 2024. The price references are in local currency (ALL) converted in US \$ with an exchange rate of **95 ALL / \$**.

No property status information has been available for the study. The cost for any necessary expropriation is not included in the total.

6 Reference pictures

Competition for a pedestrian/bicycle overpass in Donauwörth, Germany:





7 Annexes

- Annex B_I Overview Plans
- Annex B_II Visualization of Option 2
- Annex B_III Minutes of Meetings (Municipality Meeting)